

Canadian monthly surface pressure

Victoria Slonosky* and Edward Graham**
Environment Canada

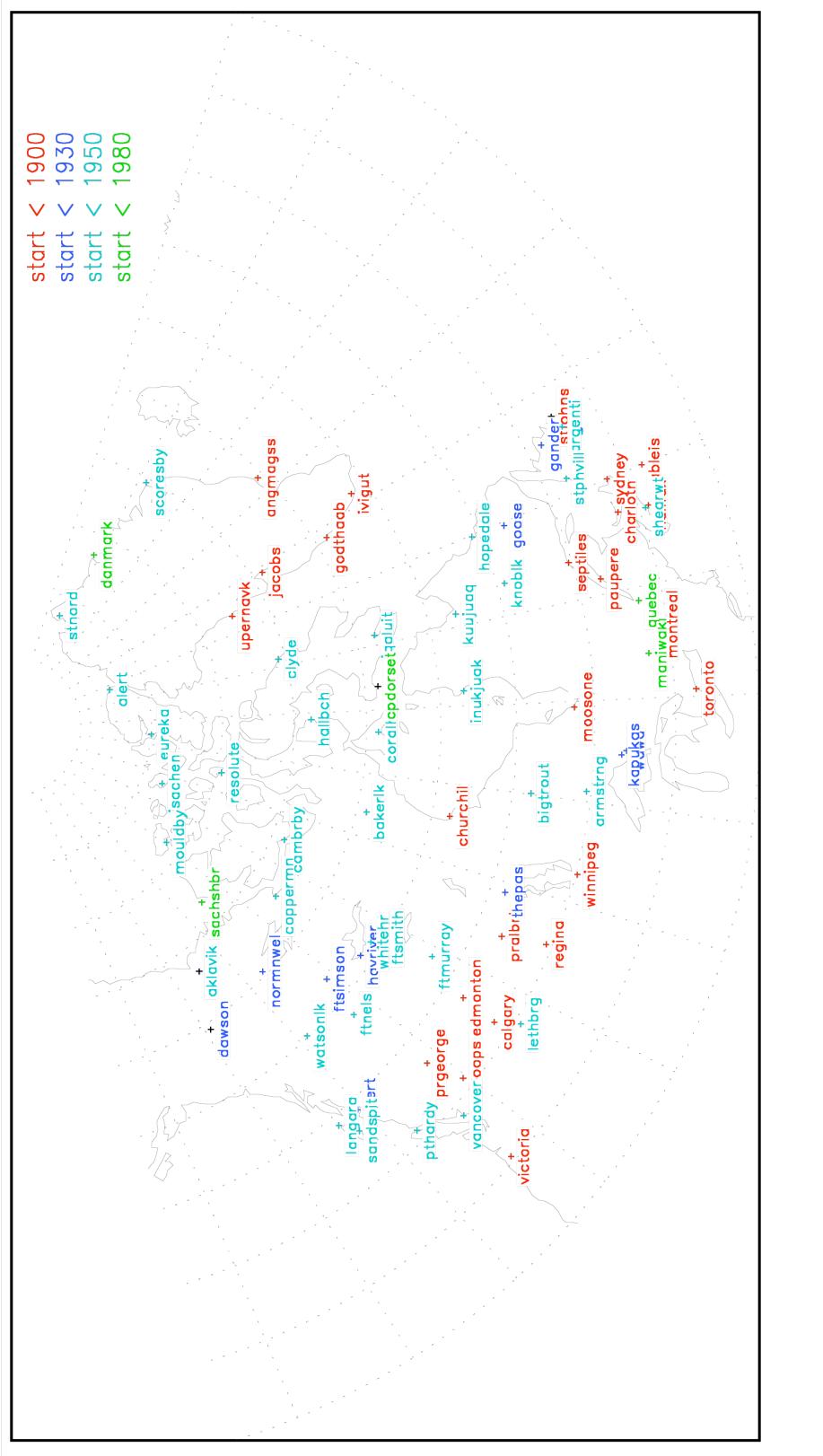
- Stations
- Sources
- Problems
- Grids and Analysis

*McGill University, Ouranos Consortium for Regional Climate change and Adaptation

** University of Fribourg , Switzerland

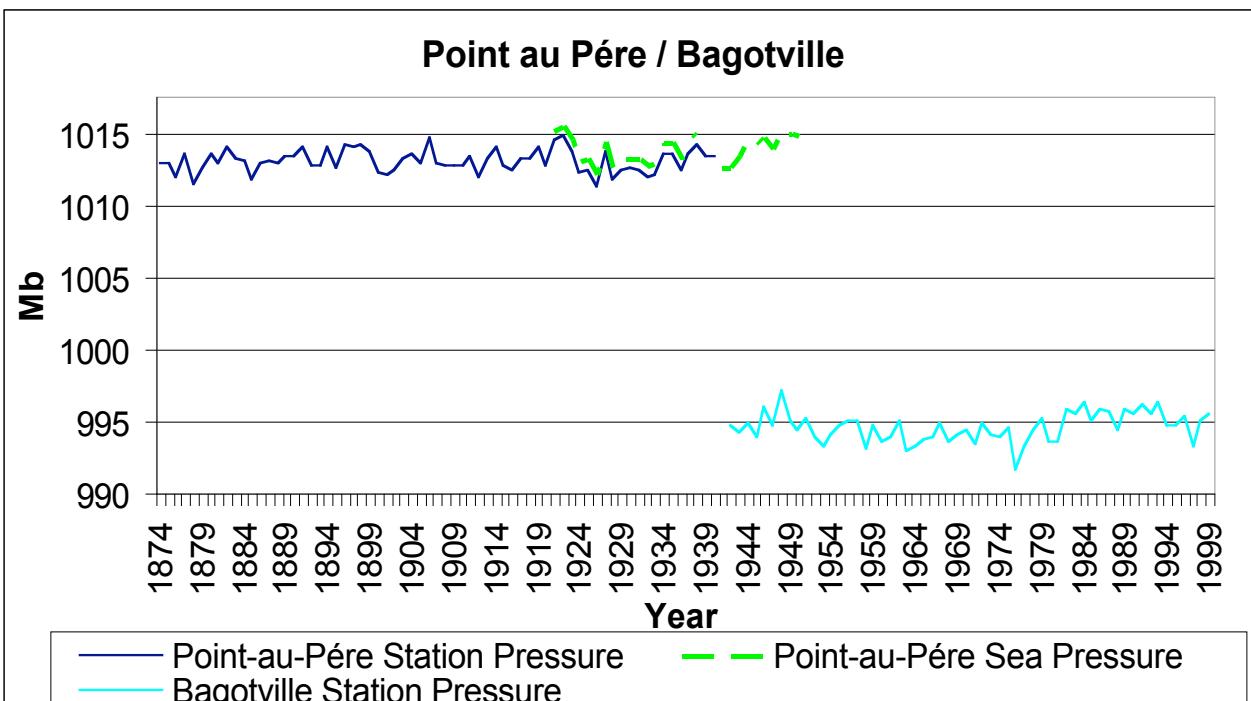
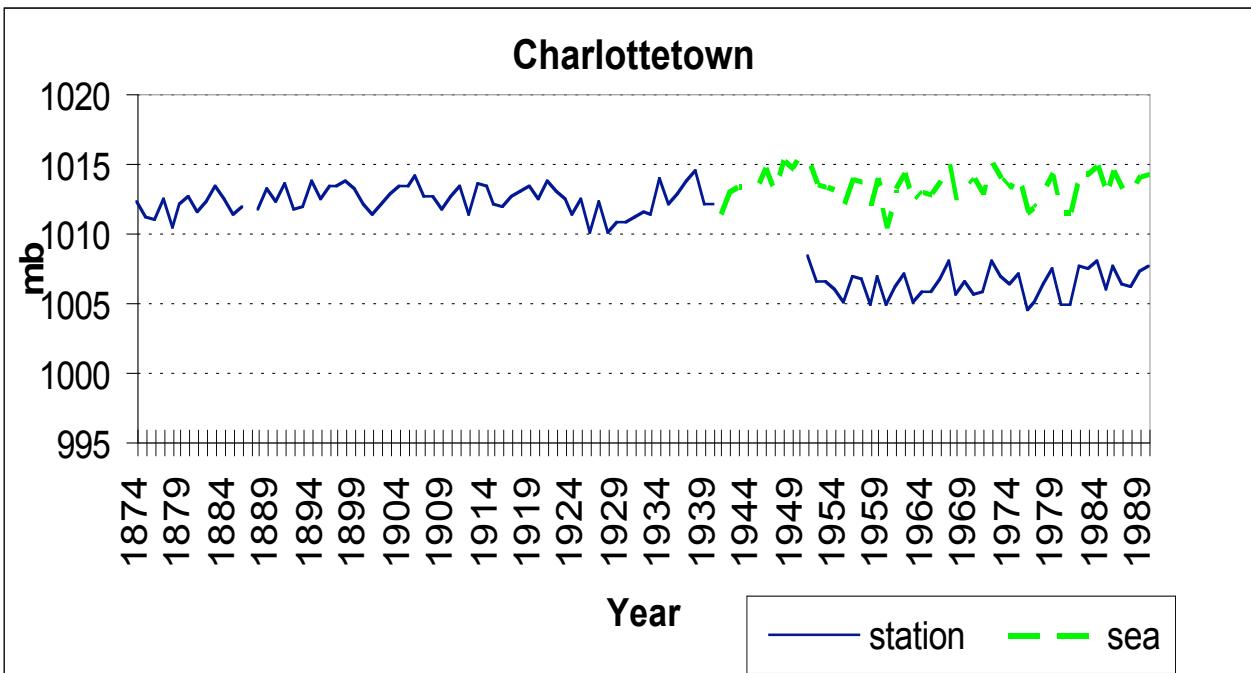
Sources

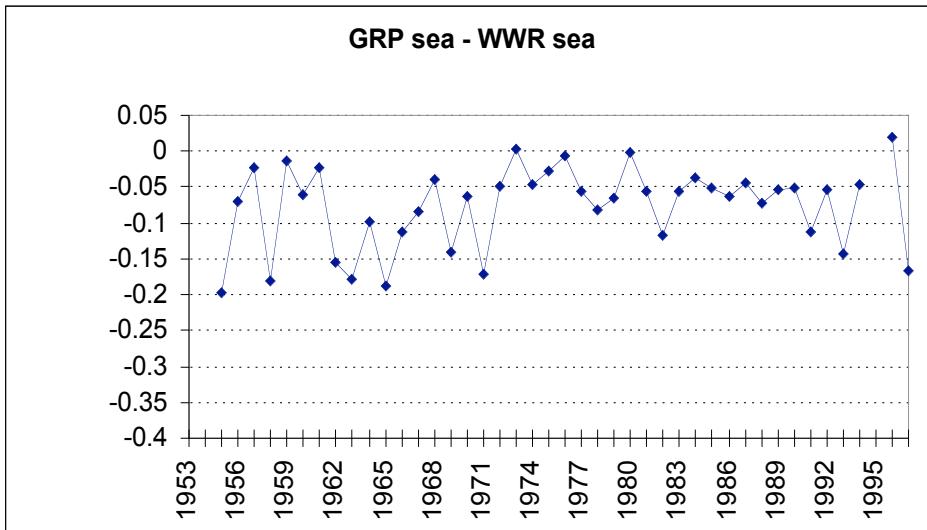
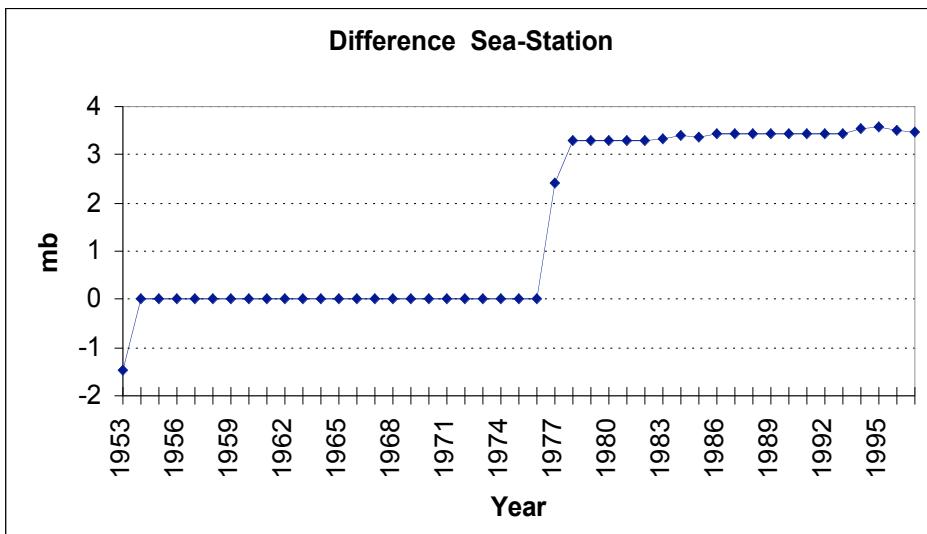
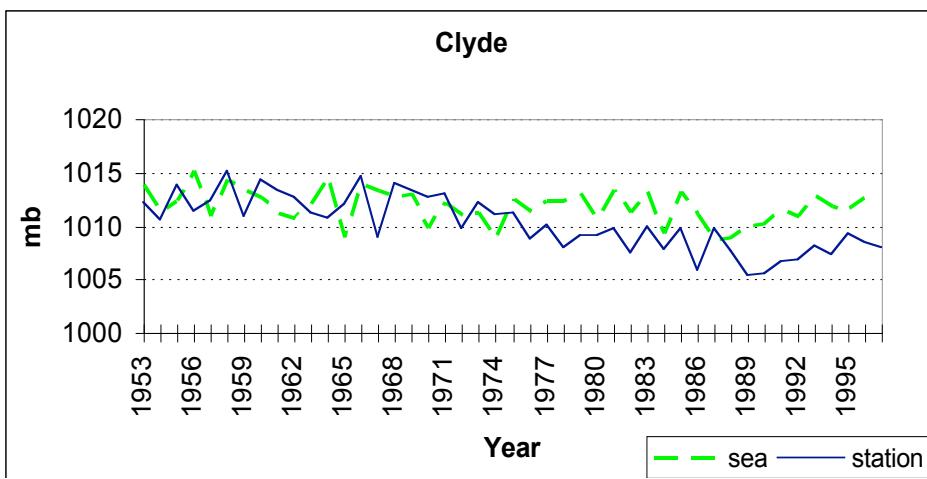
- World Weather Records & Monthly Climatic Data for the World
- GHCN
- Canadian database (hourly synoptic since 1953)
- Miscellaneous:
 - CRU/Phil Jones
 - Royal Engineers
 - Canadian archives (Environment Canada, McGill University)
 - 19th century Canadian scientific journals
 - Phil Trans Roy Met Soc
 - Academie Royale des Sciences

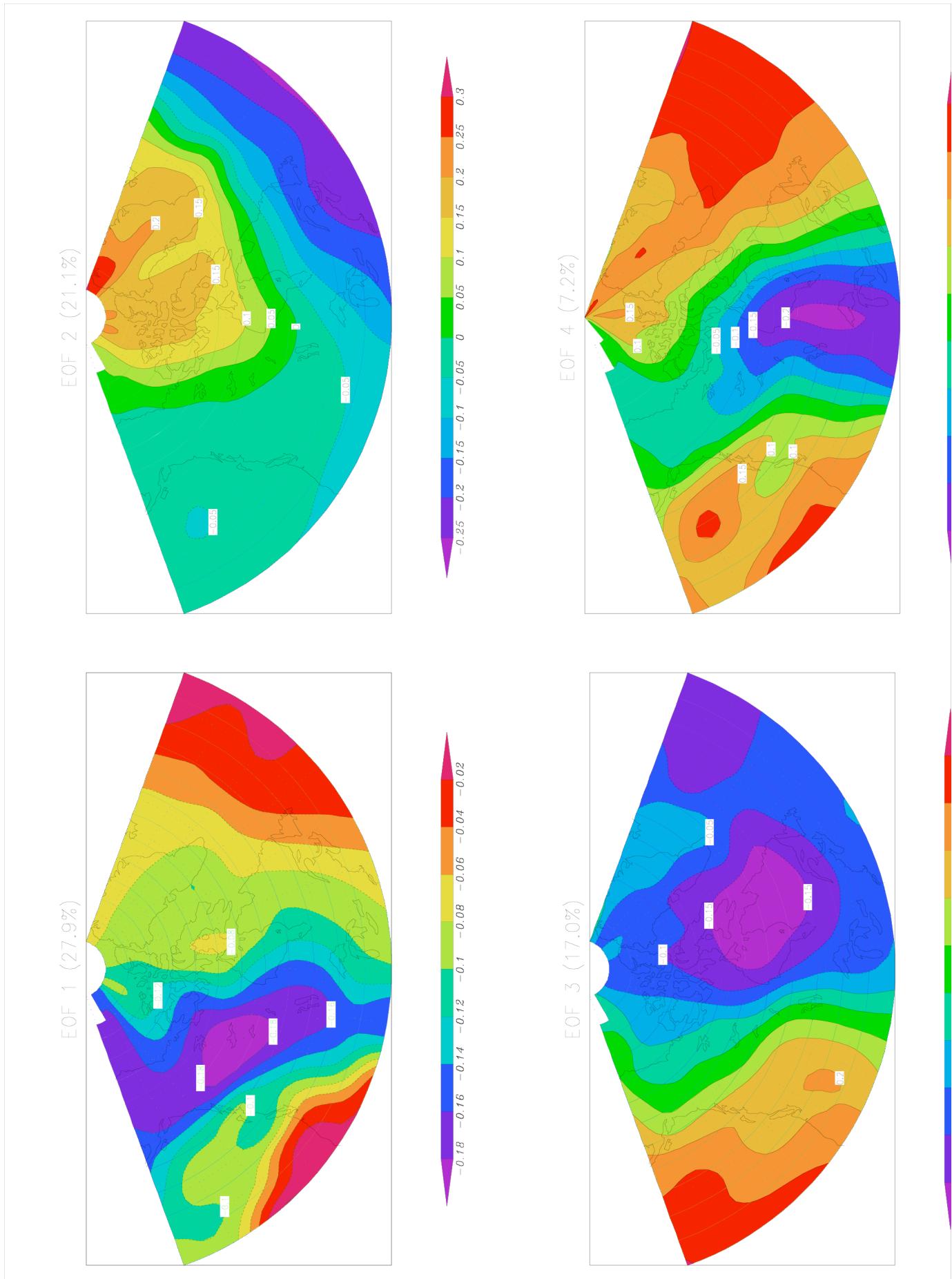


Common problems

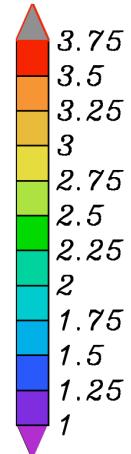
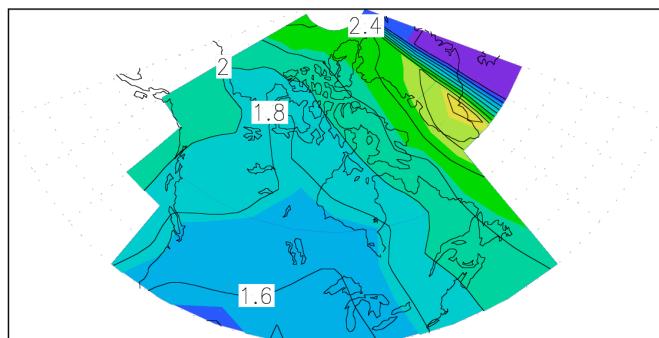
- Unreported (?) changes in station location and/or station elevation: real relocations?
- “sea” and “station” transposed (Greenland)
- Confusion between “sea” and “station”
- Confusion between feet and metres
- Conversion/rounding errors
- “50-foot” rule (WMO directive?)
1976
- Sea level plateau corrections
- Random differences between GHCN and WWR



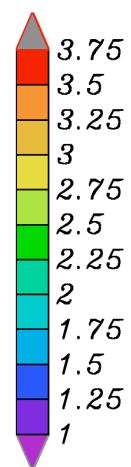
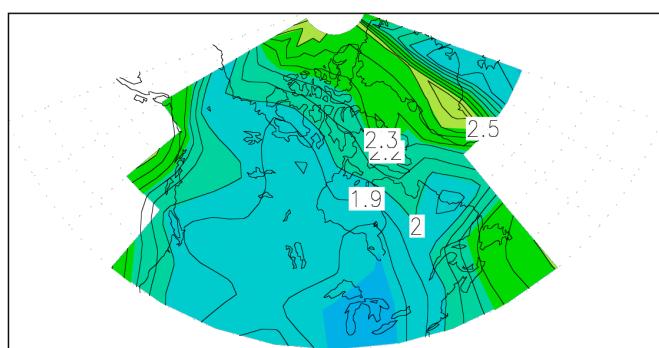




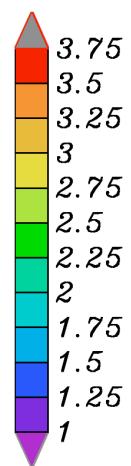
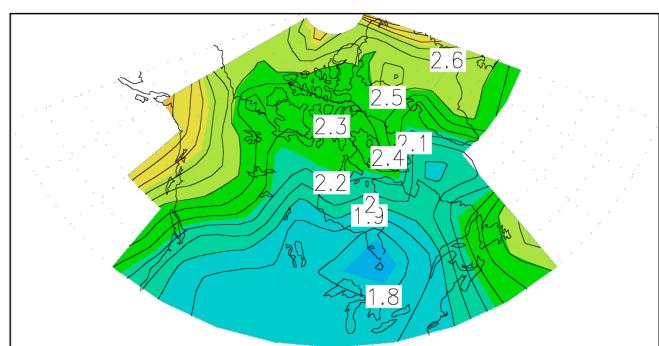
1896–1905

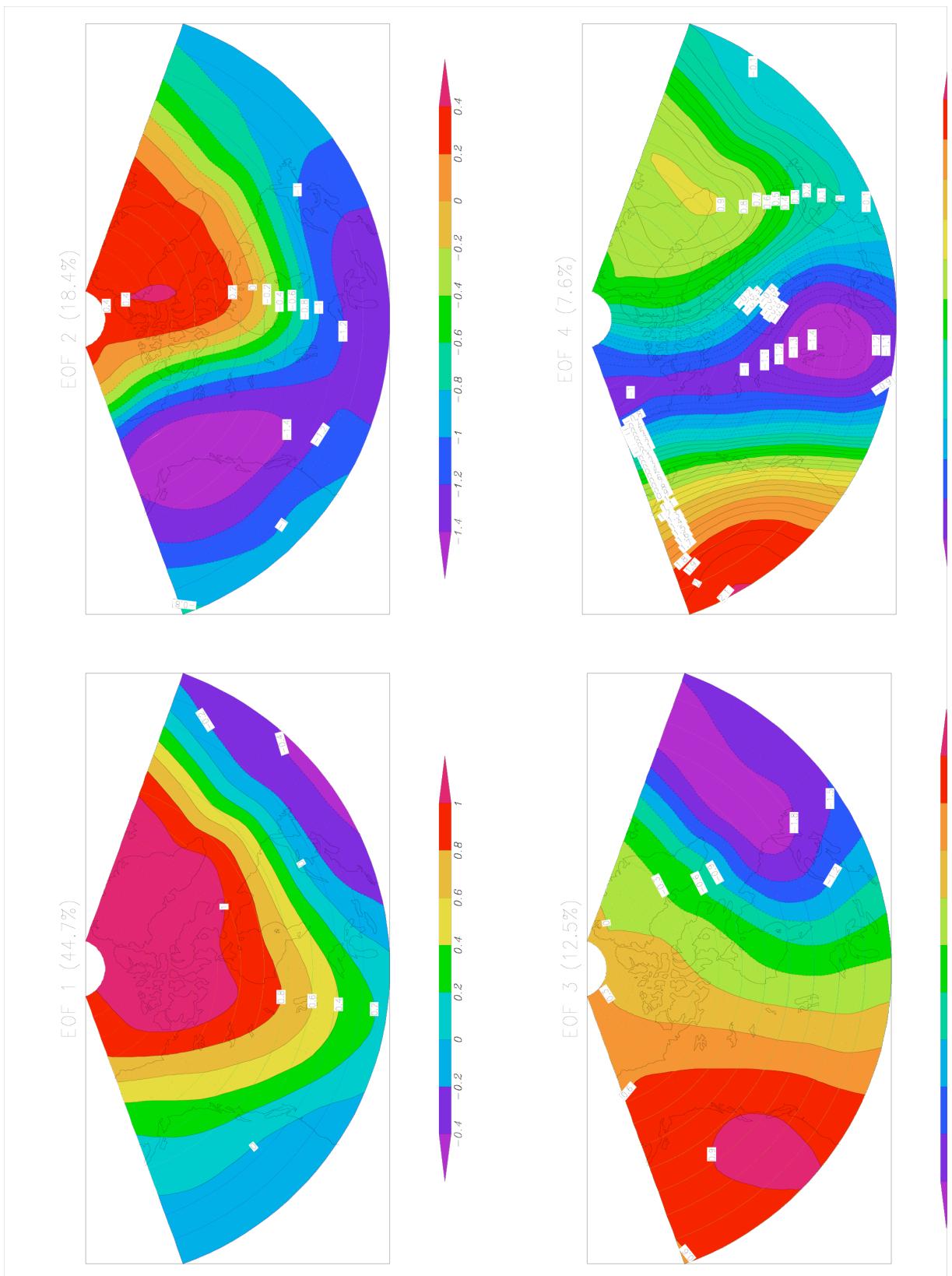


1936–1945

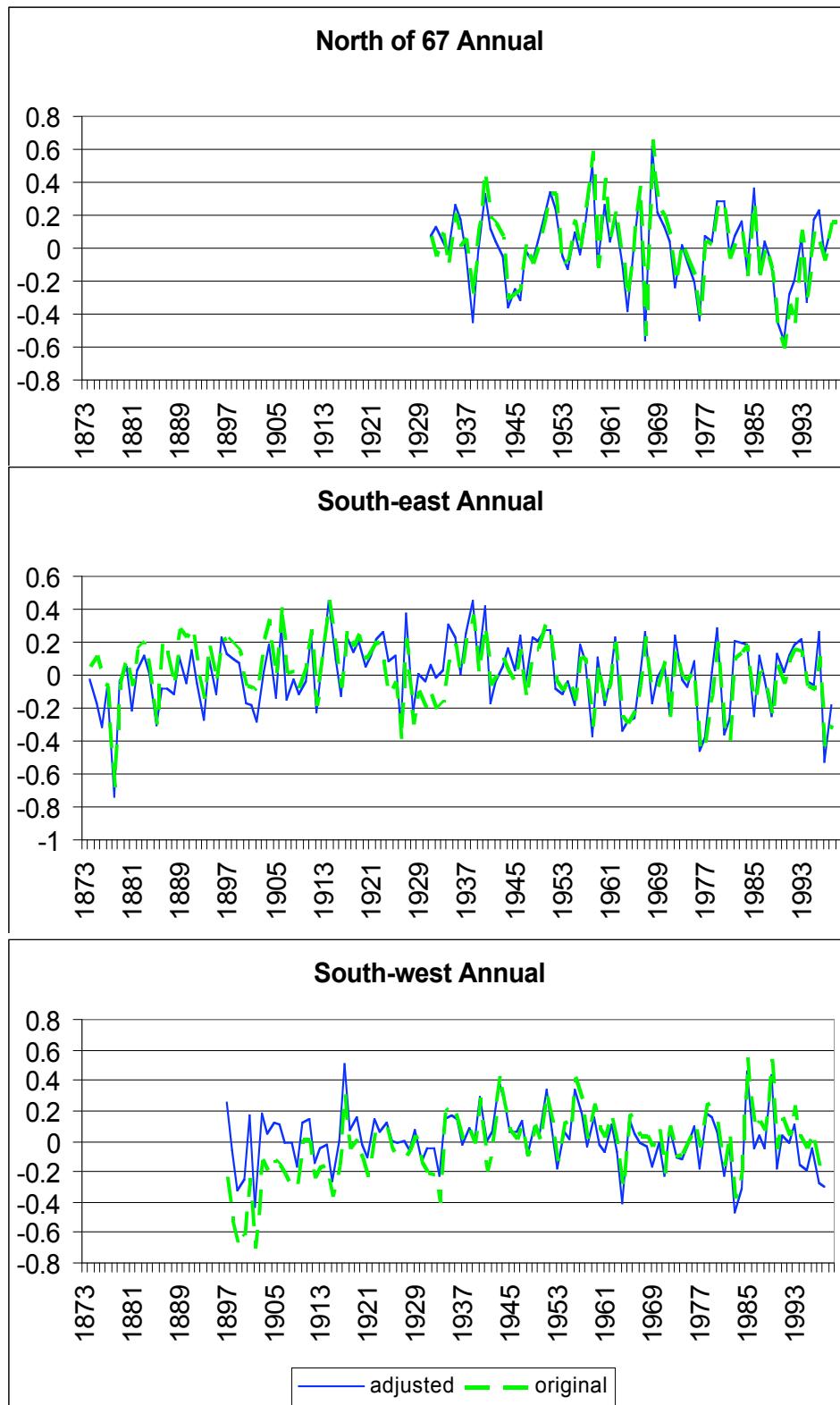


1986–1995





Area-average anomalies



Future Plans

- Analysis of pressure patterns, variability, association with temperature and precipitation
- Daily data
- 18th and 19th century data (Montreal, Quebec City, Atlantic Canada...)